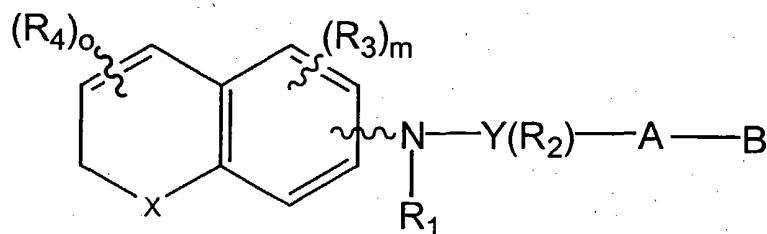


WHAT IS CLAIMED IS:

- ## 1. A compound of the formula



where X is O , S , or $C(R)_2$;

R is H or alkyl of 1 to 6 carbons;

10 R₁ is H, alkyl of 1 to 10 carbons, alkenyl of 2 to 6 carbons; phenyl-C₁-.

11 C₆ alkyl, or C₁ - C₆-alkylphenyl;

12 R, is H, alkyl of 1 to 6 carbons, F, Cl, Br, I, CF₃, fluoro substituted

13 alkyl of 1 to 6 carbons, alkoxy of 1 to 6 carbons, or alkylthio of 1 to 6

14 carbons;

15 R_3 is independently alkyl of 1 to 6 carbons, F, Cl, Br, I, CF_3 , fluoro
16 substituted alkyl of 1 to 6 carbons, OH, SH, alkoxy of 1 to 10 carbons,
17 fluoroalkoxy of 1 to 6 carbons, alkylthio of 1 to 6 carbons; benzyloxy, $C_1 - C_6$
18 alkyl substituted benzyloxy, halogen substituted benzyloxy, phenyloxy, $C_1 -$
19 C_6 alkyl substituted phenyloxy, or halogen substituted phenyloxy;

20 R_4 is independently H, alkyl of 1 to 6 carbons, or F;

21 Y is a phenyl or naphthyl group, or heteroaryl selected from a group
22 consisting of pyridyl, thienyl, furyl, pyridazinyl, pyrimidinyl, pyrazinyl,
23 thiazolyl, oxazolyl, imidazolyl and pyrrazolyl, said phenyl and heteroaryl
24 groups being optionally substituted with one or two R₁ groups;

25 **m** is an integer having the values 0 to 3;

26 o is an integer having the values 0 to 4;

27 A is $(CH_2)_q$, where q is 0-5, lower branched chain alkyl having 3-6

28 carbons, cycloalkyl having 3-6 carbons, alkenyl having 2-6 carbons and 1 or 2

29 double bonds, alkynyl having 2-6 carbons and 1 or 2 triple bonds, and

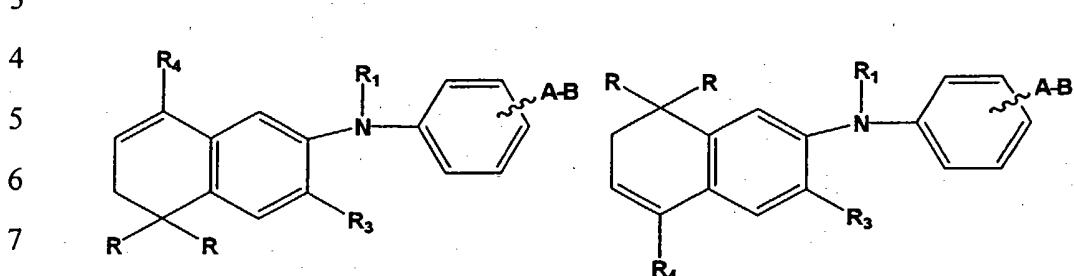
- 1 **B** is hydrogen, COOH, COOR₈, CONR₉R₁₀, -CH₂OH, CH₂OR₁₁,
- 2 CH₂OCOR₁₁, CHO, CH(OR₁₂)₂, CHOR₁₃O, -COR₇, CR₇(OR₁₂)₂, CR₇OR₁₃O, or
- 3 tri-lower alkylsilyl, where R₇ is an alkyl, cycloalkyl or alkenyl group
- 4 containing 1 to 5 carbons, R₈ is an alkyl group of 1 to 10 carbons or
- 5 trimethylsilylalkyl where the alkyl group has 1 to 10 carbons, or a cycloalkyl
- 6 group of 5 to 10 carbons, or R₈ is phenyl or lower alkylphenyl, R₉ and R₁₀
- 7 independently are hydrogen, an alkyl group of 1 to 10 carbons, or a cycloalkyl
- 8 group of 5-10 carbons, or phenyl or lower alkylphenyl, R₁₁ is lower alkyl,
- 9 phenyl or lower alkylphenyl, R₁₂ is lower alkyl, and R₁₃ is divalent alkyl
- 10 radical of 2-5 carbons, or a pharmaceutically acceptable salt of said
- 11 compound.
- 12 2. A compound in accordance with Claim 1 where **X** is C(**R**)₂.
- 13 3. A compound in accordance with Claim 1 where the **Y** group is
- 14 selected from phenyl, pyridyl, thienyl and furyl.
- 15 4. A compound in accordance with Claim 1 where **X** is S.
- 16 5. A compound in accordance with Claim 1 where **X** is O.
- 17 6. A compound in accordance with Claim 1 where the **A-B** group
- 18 represents (CH₂)_qCOOR₈ or (CH₂)_qCOOH where **q** is 0, or a
- 19 pharmaceutically acceptable salt thereof.
- 20 7. A compound in accordance with Claim 1 where **R**₁ is alkyl of 1 to
- 21 10 carbons or alkenyl of 2 to 6 carbons.
- 22 8. A compound in accordance with Claim 1 where **R**₄ is independently
- 23 H or alkyl of 1 to 6 carbons.
- 24 9. A compound in accordance with Claim 1 where **R**₁ is alkyl of 1 to
- 25 10 carbons or alkenyl of 2 to 6 carbons, **R**₄ is independently H or alkyl of 1 to
- 26 6 carbons and the **A-B** group represents (CH₂)_qCOOR₈ or (CH₂)_qCOOH
- 27 where **q** is 0, or a pharmaceutically acceptable salt thereof.

1 10. A compound that has the structure of formula (i), (ii) or (iii)

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(i)

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(ii)

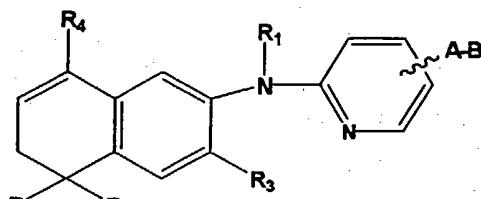
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(ii)

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where R is independently H or alkyl of 1 to 6 carbons;

21 R₁ is H or alkyl of 1 to 10 carbons or alkenyl of 2 to 6 carbons;

22 R₃ is independently alkyl of 1 to 6 carbons, F, Cl, Br, I, CF₃, fluoro

23 substituted alkyl of 1 to 6 carbons, OH, SH, alkoxy of 1 to 10 carbons,

24 fluoroalkoxy of 1 to 6 carbons, alkylthio of 1 to 6 carbons; benzyloxy, C₁ - C₆

25 alkyl substituted benzyloxy, halogen substituted benzyloxy, phenoxy, C₁ -

26 C₆ alkyl substituted phenoxy, or halogen substituted phenoxy;

27 R₄ is H or alkyl of 1 to 6 carbons;

1 A is $(CH_2)_q$ where q is 0-5, lower branched chain alkyl having 3-6
2 carbons, cycloalkyl having 3-6 carbons, alkenyl having 2-6 carbons and 1 or 2
3 double bonds, alkynyl having 2-6 carbons and 1 or 2 triple bonds, and
4 B is hydrogen, COOH, COOR₈, CONR₉R₁₀, -CH₂OH, CH₂OR₁₁,
5 CH₂OCOR₁₁, CHO, CH(OR₁₂)₂, CHOR₁₃O, -COR₇, CR₇(OR₁₂)₂, CR₇OR₁₃O, or
6 tri-lower alkylsilyl, where R₇ is an alkyl, cycloalkyl or alkenyl group
7 containing 1 to 5 carbons, R₈ is an alkyl group of 1 to 10 carbons or
8 trimethylsilylalkyl where the alkyl group has 1 to 10 carbons, or a cycloalkyl
9 group of 5 to 10 carbons, or R₈ is phenyl or lower alkylphenyl, R₉ and R₁₀
10 independently are hydrogen, an alkyl group of 1 to 10 carbons, or a cycloalkyl
11 group of 5-10 carbons, or phenyl or lower alkylphenyl, R₁₁ is lower alkyl,
12 phenyl or lower alkylphenyl, R₁₂ is lower alkyl, and R₁₃ is divalent alkyl
13 radical of 2-5 carbons, or a pharmaceutically acceptable salt of said
14 compound.

1 **11.** A compound in accordance with Claim 10 that has the structural
2 formula (i).

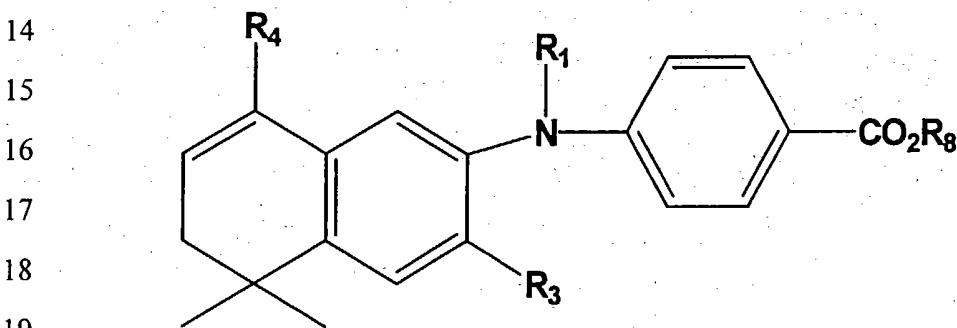
3 **12.** A compound in accordance with Claim 10 that has the structural
4 formula (ii).

5 **13.** A compound in accordance with Claim 10 that has the structural
6 formula (iii).

7 **14.** A compound in accordance with Claim 10 where \mathbf{R}_4 and \mathbf{R}_1 both
8 are alkyl.

9 **15.** A compound in accordance with Claim 10 where the $\mathbf{A-B}$ group
10 represents $(\text{CH}_2)_q\text{COOR}_8$ or $(\text{CH}_2)_q\text{COOH}$ where q is 0, or a
11 pharmaceutically acceptable salt thereof.

12 **16.** A compound of the formula



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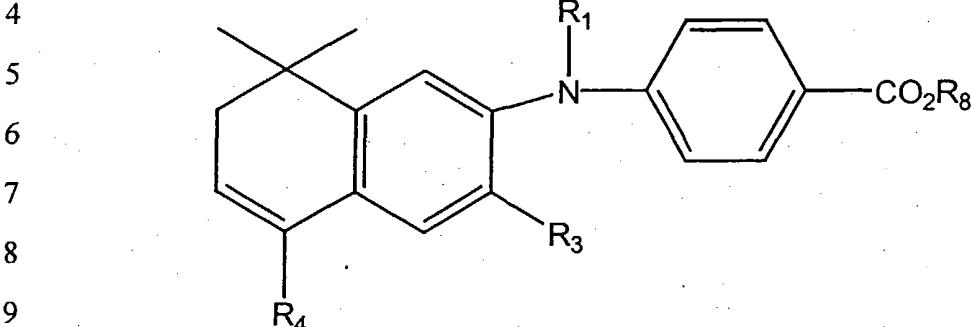
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22 where \mathbf{R}_1 is alkyl of 1 to 6 carbons or alkenyl of 2 to 6 carbons;
23 \mathbf{R}_3 is H, alkyl of 1 to 6 carbons, OH, or alkoxy of 1 to 10 carbons,
24 benzyloxy; or $\text{C}_1 - \text{C}_6$ alkyl substituted benzyloxy;
25 \mathbf{R}_4 is alkyl of 1 to 6 carbons, and
26 \mathbf{R}_8 is H or alkyl of 1 to 6 carbons, or a pharmaceutically acceptable salt
27 of said compound.

- 1 17. A compound in accordance with Claim 16 where R_4 is methyl,
2 ethyl, *iso*-propyl or *tertiary*-butyl.
- 3 18. A compound in accordance with Claim 16 where R_1 is methyl,
4 ethyl, *n*-propyl, allyl, or cyclopropylmethyl.
- 5 19. A compound in accordance with Claim 16 where R_3 is H, methyl,
6 ethyl, *n*-propyl, *iso*-propyl, methoxy, ethoxy, *n*-propyloxy, *iso*-propyloxy, *n*-
7 butoxy, *n*-hexyloxy, *n*-heptyloxy, benzyloxy, 4-methylbenzyloxy, or 2,4-di-*t*-
8 butylbenzyloxy.
- 9 20. A compound in accordance with Claim 16 where R_1 is methyl,
10 ethyl, *n*-propyl, allyl, or cyclopropylmethyl;
11 R_3 is H, methyl, ethyl, *n*-propyl, *iso*-propyl, methoxy, ethoxy, *n*-
12 propyloxy, *iso*-propyloxy, *n*-butoxy, *n*-hexyloxy, *n*-heptyloxy, benzyloxy, 4-
13 methylbenzyloxy, or 2,4-di-*t*-butylbenzyloxy, and
14 R_4 is methyl, ethyl, *iso*-propyl or *tertiary*-butyl.

1 21. A compound in accordance with Claim 20 where R_8 is H or ethyl.

2 22. A compound of the formula



where R_1 is alkyl of 1 to 6 carbons or alkenyl of 2 to 6 carbons;

R_3 is H, alkyl of 1 to 6 carbons, OH, or alkoxy of 1 to 10 carbons, or benzyloxy;

R_4 is alkyl of 1 to 6 carbons, and

R_8 is H or alkyl of 1 to 6 carbons, or a pharmaceutically acceptable salt of said compound.

23. A compound in accordance with Claim 22 where R_4 is methyl, ethyl, *iso*-propyl or *tertiary*-butyl.

24. A compound in accordance with Claim 22 where R_1 is methyl, ethyl, *n*-propyl, allyl, or cyclopropylmethyl.

25. A compound in accordance with Claim 22 where R_3 is H, methyl, ethyl, *n*-propyl, *iso*-propyl, benzyloxy, methoxy, ethoxy, *n*-propyloxy, *iso*-propyloxy, *n*-hexyloxy, or *n*-heptyloxy.

26. A compound in accordance with Claim 22 where R_1 is methyl, ethyl, *n*-propyl, allyl, or cyclopropyl methyl;

R_3 is H, methyl, ethyl, *n*-propyl, *iso*-propyl, benzyloxy, methoxy, ethoxy, *n*-propyloxy, *iso*-propyloxy, *n*-hexyloxy or *n*-heptyloxy, and

R_4 is methyl, ethyl, *iso*-propyl or *tertiary*-butyl.

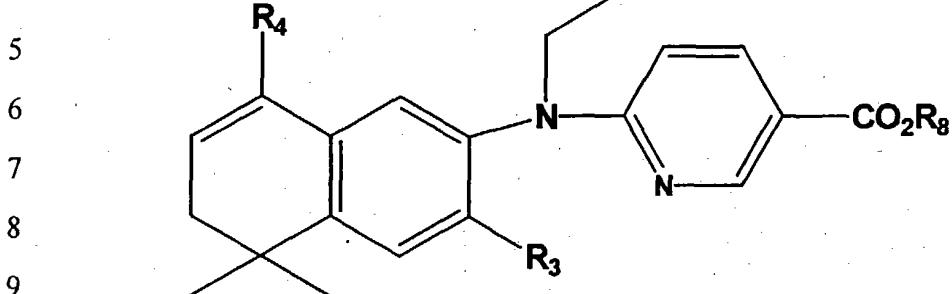
27. A compound in accordance with Claim 26 where R_8 is H or ethyl.

1 28. A compound of the formula

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6 where R_3 is H, or alkyl of 1 to 6 carbons;

7 R_4 is alkyl of 1 to 6 carbons, and

8 R_8 is H or alkyl of 1 to 6 carbons, or a pharmaceutically acceptable salt

9 of said compound.

10 29. A compound in accordance with Claim 28 where R_4 is methyl,

11 ethyl, *i*-propyl or *t*-butyl.

12 30. A compound in accordance with Claim 28 where R_3 is H, or *n*-

13 butyloxy.

14 31. A compound in accordance with Claim 28 where R_8 is H or ethyl.

15 32. A compound in accordance with Claim 28 where R_4 is methyl,

16 ethyl, *i*-propyl or *t*-butyl;

17 R_3 is H, or *n*-butyloxy, and R_8 is H or ethyl.

18 33. A compound in accordance with Claim 32 where R_8 is H or ethyl.

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